

# EXHIBIT 10

**DECLARATION OF STEPHEN DEWHURST, PhD**

I, Stephen Dewhurst, PhD, declare as follows:

1. I am the Vice President for Research at University of Rochester (“Rochester” or “University”) in Rochester, New York. I have held that position since 2023, after serving as Interim Vice President for Research from 2021 - 2023. I am also Vice Dean for Research at the University’s School of Medicine and Dentistry (“SMD”), and since 1990 have been a faculty member in the University of Rochester Medical Center (“Medical Center”), an operating unit of the University.

2. As Vice President for Research, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Rochester personnel, and could testify thereto.

***The University’s Economic, Medical and Scientific Impact***

3. The University, as an academic research institution, is our region’s largest private employer, and seventh-largest private employer in New York State. The University currently employs approximately 38,565 individuals, and received approximately \$486 million in sponsored program funding in fiscal year 2024.

4. The University’s Hajim School of Engineering and Applied Sciences (“Hajim”) and its School of Arts and Sciences (“SAS”) received a total of approximately \$90 million in external research funding in fiscal year 2024. In the 2024–25 academic year, Arts and Sciences & Hajim Engineering enrolled 6,917 students, including 5,444 full-time undergraduates, 1,350 graduate students and 123 part-time students.

5. Hajim, which includes the Institute of Optics, is a significant driver of scientific innovation and economic development in the local and regional space. Hajim currently employs

approximately 200 faculty and staff, and operates a global Industrial Associates program that partners with more than 60 private sector members to provide educational training and networking benefits to participating companies, including new course development and student research projects, and exposes faculty and students to a wide range of optics and semiconductor industry interests. Members range from core semiconductor equipment manufacturers, such as ASML and KLA-Tencor, to regional optics manufacturers, such as Corning and Optimax, who are critical to the supply chain for lithographic printing and inspection.

6. SAS is the University's largest school, consisting of 19 departments, numerous centers and programs, and 274 faculty members. SAS closely integrates advanced research with its educational mission to prepare the next generations of innovators and scientists. The Department of Chemistry and the Department of Physics and Astronomy lead critical research in quantum science, particle physics, materials science, and new energy sources. SAS collaborates closely with Hajim, the Laboratory for Laser Energetics (“LLE”), and the University of Rochester Medical Center (“URMC”), with many joint programs and faculty affiliations.

7. The University and URMC, together with affiliate and partner hospitals and medical centers across the region, provide medical services to over 3 million people across 27 counties in underserved rural and urban settings—an area with the second highest incidence of cancer in the nation—along with ailments such as Alzheimer’s disease and Parkinson’s disease, musculoskeletal illnesses and an array of rare and complex diseases such as neuromuscular diseases, Huntington’s disease, cystic fibrosis, Lou Gehrig’s disease, autoimmune disorders and more.

8. The University’s Laboratory for Laser Energetics (“LLE”) is the nation's leading university-based research center in fusion, laser science and technology, and high-energy-density

(HED) science research, and operates two of the largest and most-capable government-owned lasers at any academic institution in the world. LLE employs more than 450 full-time employees, and its economic activity supports an additional 550 spillover jobs for a total impact of about 1,000 jobs, \$66 million in income and \$3.7 million in revenue to state and local governments. Since FY 2015, LLE has made approximately \$57.6 million in purchases from over 1,000 New York State vendors. LLE provides a strong stimulus to the local economy by helping attract and develop new investors and companies, such as Sydor Technologies, whose portfolio of products support customers in defense, energy, light sources, research, and other scientific fields.

**The University's Vital Research for the Department of Energy**

9. Rochester receives substantial annual funding from the Department of Energy ("DOE"). As of April 2025, the University has a total of approximately \$112 million in active funding from the DOE, including \$99.4 million towards the Cooperative Agreement that supports the University's LLE.

10. The University also receives adjacent funding from other federal agencies, including the Department of Defense (DOD), that rely on DOE-funded infrastructure and resources, including approximately \$16 million at the LLE annually for various active projects.

11. Stated simply, any loss of Rochester's DOE funding, either by grant termination or reduced indirect costs, would have a catastrophic impact.

12. The funding Rochester receives from DOE supports critical and cutting-edge scientific research, which millions of Americans benefit from and depend on. For example:

- a. Theoretical and experimental elementary particle physics. Rochester has a rich tradition in studies of elementary particle physics. That tradition continues today as University faculty were members of the collaboration recognized by

the 2025 Breakthrough Prize in Fundamental Physics. The Rochester group studies quarks and bosons using the Large Hadron Collider (CERN) and neutrinos using the Deep Underground Neutrino Experiment (Fermilab). The group is also studying quantum electrodynamics, where intense electromagnetic fields change the dynamics of electrons and positrons, using facilities under development at LLE.

- b. Fundamental chemistry research on novel energy production. University researchers are developing novel processes to tap the potential of new fuels to meet a national strategic need. Hydrogen is especially attractive because of its high energy density and clean by-products. Supported by DOE, faculty are developing artificial enzymes to catalyze the production of hydrogen from water, opening the potential of this energy source. Researchers are also developing catalysts to perform the transformations needed for the production of energy from other chemical fuels.
- c. High energy density physics. High energy density physics (HEDP) explores the realm where new states of matter arise when applied external forces exceed intrinsic chemical or atomic forces. It includes applying extreme external forces that can initiate nuclear fusion in the laboratory, opening the potential of harnessing this energy source for society. Rochester is at the forefront of this research, with comprehensive programs spanning theory, computation and experiments. The University also is home to the Flash Center for Computational Science, an essential resource in these studies, with a focus on high energy density magnetized plasma turbulence. HEDP Research at Rochester includes

the Institute for Matter at Extreme Energy Density and Center for Matter at Atomic Pressures at the University.

- d. Fusion Energy research. DOE has awarded a grant to Focused Energy in collaboration with the LLE, with the goal of accelerating foundational research in fusion energy, and fostering enhanced collaboration between businesses, national laboratories, and universities. The project is part of the Innovation Network for Fusion Energy (INFUSE), a DOE initiative designed to provide technical and financial support to advance fusion technologies in the private sector. DOE also funds the Inertial Fusion Energy (IFE)-Consortium on Laser-Plasma Interaction (LPI) Research (IFE-COLoR), which is a Hub for broadband LPI science focused on inertial fusion energy that brings together experts from the University of Rochester, the University of California at Los Angeles, the University of Nebraska-Lincoln, and the private sector (Ergodic, LLC, and Xcimer Energy, Inc.). DOE has also awarded LLE funding to establish the Inertial Fusion Energy Science and Technology Accelerated Research (IFE-STAR) ecosystem that brings together academia, national laboratories, and the private sector to develop a clean, safe, and virtually limitless energy source, built on US leadership in inertial fusion.
- e. Quantum Information Science and Engineering. Rochester faculty have been pioneers in quantum information science and engineering, an area of research that is of high national and strategic importance.<sup>1</sup> This research, based in the

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<sup>1</sup> A Letter to Michael Kratsios, Director of the White House Office of Science and Technology Policy – The White House.

Hajim School of Engineering and Applied Sciences, the School of Arts and Sciences and LLE, includes:

- i. Quantum computing. Quantum computers, capable of calculations impossible with current technologies, are developing rapidly, and Rochester faculty are leveraging historical strengths in optics and quantum optics to advance this technology with key discoveries in quantum light-matter interfaces.
  - ii. Quantum networks. The University, in a partnership with the Rochester Institute of Technology, has established a local quantum communications testbed that will be used to develop new quantum algorithms and technology.
  - iii. Quantum chemistry. Scientists at the University are leaders in harnessing quantum light-matter interactions to study new chemical reactions with both computer simulations and novel experimental devices.
  - iv. Quantum materials. Rochester faculty are developing new materials for quantum information science and engineering, with a focus on 2-D materials and nanoparticles.
- f. National security activities. Rochester performs scientific research vital to our nation's security interests, including the operation of LLE's Omega laser Facilities ("Omega"). LLE is one of the nation's three primary Inertial Confinement Fusion ("ICF") and HED science facilities, along with the National Ignition Facility ("NIF") at Lawrence Livermore National Laboratory

and the Z Pulsed Power Facility at Sandia National Laboratory (“Sandia”). Omega provides five times more experiments (“shots”) than NIF at Lawrence Livermore National Laboratory (“LLNL”) and the Z Pulsed Power Facility. The significant data generated on the Omega facilities coupled with LLE’s and Rochester’s computational capabilities makes the University a leader in applying Artificial Intelligence and Machine Learning to fusion research. LLE’s expertise in laser design and laser-material science results in more than \$10M per year funding from the Department of Defense (“DOD”) to pursue directed energy research to solve national challenges and to train a workforce pipeline.

- g. Critical expertise. DOE-funded programs support Rochester’s unique concentration of individual and departmental expertise supporting scientific, economic and national security achievements. Recent examples include LLE’s fusion energy technologies, which received two INFUSE awards to work with XCIMER and Focused Energy, created two start-up companies, and received a FIRE collaboration with Savannah River National Laboratory to pursue tritium research as a critical part of the fusion fuel lifecycle. The DOE has awarded the University one of the three national hubs for fusion energy, acknowledging the University and LLE’s unique experimental capabilities, computational science, connections to industry and next generation laser technology. Indeed, two Nobel prize winning University alumni performed DOE-funded research while at Rochester.



**Rochester Will Be Irreparably Harmed by Arbitrary DOE Terminations or Rate Cuts**

13. Rochester's DOE grants, including current indirect costs, are essential for supporting this research. The DOE's proposal to cut indirect cost rates to 15% and/or terminate Rochester's grants would end or seriously jeopardize significant research at the University, including the vital projects described above.

14. Rochester's DOE grants, including indirect costs, support vital infrastructure necessary to perform the fundamental research, including:

- a. Infrastructure. University of Rochester research and teaching relies on infrastructure to support experiments, computation and device/component fabrication.
- b. Cleanroom fabrication and metrology. Experimental quantum research and HEDP research rely on the University's cleanroom fabrication and metrology facility, URnano. Equipment and fabrication tools including high-precision lithography, material deposition, etching, thermal processing, whereas metrology includes electron microscopes (scanning and transmission electron microscopes) and other essential instruments.
- c. Research laboratories (experiments). University of Rochester research relies on faculty research laboratories in its Institute of Optics and Departments of Physics and Astronomy, Electrical and Computer Engineering, Mechanical Engineering, Chemistry, and Chemical Engineering. Major, cutting-edge equipment in these labs includes dilution refrigerators for superconducting q-bits and optics/photonics labs, as well as metrology infrastructure for characterization of materials.

- d. Computing research. Faculty engaged in quantum computer simulations rely on infrastructure of the University's Goergen Institute for Data Sciences and Artificial Intelligence and the University's high performance computing facility, CIRC.
- e. HEDP research facilities. HEDP research relies on infrastructure at LLE and in research labs in the Departments of Physics and Astronomy and Mechanical Engineering at the University. HEDP faculty in experimental science utilize URnano for device fabrication and characterization, and faculty engaged in numerical simulations use the University's high performance computing infrastructure (CIRC).
- f. Workforce development. Rochester has leading education programs in the areas of quantum science, engineering and particle physics—areas of vital national interest for the United States to remain the leader in this critical research area—and plans to expand our offerings to meet this national need:
  - i. Rochester plans to further integrate workforce development with our research mission, with students obtaining essential training in quantum science and engineering in active research labs and URnano.
  - ii. Rochester's LLE affords a unique opportunity to provide educational training alongside fundamental research in the vital area of inertial fusion energy.
  - iii. The University offers comprehensive PhD programs with concentrations in chemistry, high-energy-density physics, plasma physics, and inertial confinement fusion studies. These programs

address the needs for a highly trained workforce to: realize the potential of advances in hydrogen-based fuels, quantum materials, and HEDP; to support DOE NNSA's network of national laboratories; and to develop nuclear fusion as a novel energy source. The LLE is nationally recognized as the only facility that trains graduate students in ICF and thereby serves as a critical pipeline of talent that is vitally important to our national security and economic security.

Without the support of the total grant funding with full indirect costs, which allow the University to operate necessary equipment and infrastructure, we cannot conduct the research, nor will we be able to support fully economic development in the local and regional area.

15. For example, our diverse research in Quantum Information Science and Engineering, HEDP and chemical approaches to developing new energy sources relies on the University's Integrated Nanosystems Center, known as URnano. This facility also supports corporate users, including small companies and startups. The loss of grant funding and overall facilities support will set back Rochester fundamental research and hamper the University's goal of fostering the economic development of the region through advances in critical technologies, new venture creation and technology commercialization (e.g. the University is a member of the EDA NY SMART I-Corridor Tech Hub, which supports economic development across the Buffalo-Rochester-Syracuse region).

16. Physical space costs are one of the largest components of grant award indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at Rochester. For example, URnano is a state-of-the-art nano fabrication facility offering deposition and etch, lithography, and metrology capabilities. URnano is a user

facility serving the University community, industry, and corporations, as well as faculty and students at other institutions as a key regional resource. URnano has approximately 2,000 square feet of class 1000 cleanroom. By housing this specialized equipment at a research university and allowing student access, URnano not only supports research breakthroughs and the development of new technologies, but also plays an important role in training the current and future generations of technologists who will help meet the increasing demands for highly skilled workers.

17. Security of the physical space and all visiting researchers is also a vital component of the University's work for DOE, including maintenance and operation of a highly secure LLE facility overseen by individuals with high security clearances where approximately \$600M in government-owned lasers are safeguarded and operated in support not only of Rochester research, but also DOE NNSA's network of national laboratories—and a loss in funding will jeopardize the fundamental security, integrity and operability of these vital installations.

18. The grant awards and indirect costs related to physical security address critical services necessary to performing University research, including radiation safety capabilities for handling tritium—a radioactive and flammable gas—and similar materials. Indirect costs further support radiation and pressure safety officers, satisfaction of DOE Facility Access and Assignment protocols so all foreign national visitors or collaborating scientists may be vetted, and security and climate systems to provide necessary cooling and climate control for sensitive government-owned lasers.

19. The University also maintains and operates the Conesus supercomputer for DOE's NNSA, one of the 500 most powerful computer systems in the world, and supports high performance computing to simulate high-energy-density physics and inertial confinement fusion experiments that are essential to NNSA's mission. Conesus is operated in an access-controlled

area within the University's secure Data Center, supported by the University's indirect funding. Loss of funding to LLE will jeopardize the University's ability to operate and maintain this resource.

20. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as DOE.<sup>2</sup> These mandates serve many important functions, including: ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data, including compliance with NIST standards, management of CUI and government sensitive information, and maintenance of high-security clearances.

21. Importantly, these potential injuries would be exponentially worse if the grants themselves were terminated, including most notably the wholesale loss of funding to LLE. If its DOE funding were to be terminated, LLE would likely close and its uniquely qualified and experienced scientific staff would likely be laid off. As a result, many or all of these experts would leave for other opportunities domestically where they may still benefit DOE research but at a higher cost, or even find opportunities in other nations where their expertise would benefit the high-tech scientific and energy programs of those countries in areas such as fusion energy, quantum science, and AI/computational science—to the detriment of the interests of the United States. The government owned lasers housed by LLE would fail to be maintained adequately, and the impact on local businesses that partner with LLE would be devastating. In addition, DOE

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<sup>2</sup> <https://www.ecfr.gov/current/title-2/subtitle-B/chapter-IX/part-910/subpart-B>, and <https://www.nsf.gov/awards/terms-conditions/research>

NNSA's network of national laboratories would have nowhere to conduct critical experiments at a scale that promotes innovation which are necessary to protect national security and to develop the workforce of the future that functions to protect our nation's security. It is well known that early exposure to scientific opportunities create the networks which result in students being attracted to specific research areas. LLE is the premier facility in academia for both building this connection and training to the level of scale and rigor needed by the national Labs which steward the US nuclear deterrent.

22. Recovery of Rochester's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

23. Through fiscal year 2026-2027, the University's predetermined indirect cost rate is 51%.

24. The impact of a reduction in the indirect cost rate would be devastating. Of the approximately \$112 million in DOE funding at the University, approximately \$75 million is allocated for direct costs, and \$37 million for indirect costs, and the University has engaged in planning based on these amounts.

25. If—contrary to what University of Rochester has negotiated with the federal government—the indirect cost rate is reduced to 15%, that would reduce the University's anticipated annual indirect cost recovery by well in excess of approximately \$25 million.

26. This reduction, let alone a wholesale termination of Rochester's DOE grants, will have deeply damaging effects on Rochester's ability to conduct research from day one due to elimination of funding, including the following likely effects:

- a. Slowing, pausing or hampering active research, including use of the DOE's lasers in research by other national laboratories;

- b. Inability to properly maintain or operate research laboratories and research equipment;
- c. Impairing ongoing efforts to recruit top research faculty, as well as top graduate students from around the world;
- d. Reduction in workforce development, including training the next generation of researchers in areas vital to the United States' economic and security interests;
- e. Delaying or eliminating construction of planned research facilities, including those partially funded by the University.

27. The harm to Rochester's relationships with some of the world's most highly skilled researchers will also be undermined by the University's loss of funding, and inability to rely on the DOE's contractual promises, as, for example, LLE's researchers will find superior and reliable funding in other countries, resulting in a catastrophic "brain drain" that will destroy a concentrated community of scientific experts effectively serving as a scientific backbone for high-energy particle physics, quantum science, fusion energy science, and other areas of vital national concern.

28. Rochester has for decades relied on the payment of full grant amounts, including full indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, utility costs, and grant management support), and facility and equipment purchases. And in some cases, Rochester has long-term obligations to be satisfied by budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments, such as:

- a. Maintaining and modernizing physical and digital infrastructures to support laboratory space and equipment.
- b. Supporting long-term experiential learning for admitted PhD students representing the future of the U.S. nuclear energy, particle physics, nanotechnology, quantum computing and other vital scientific research workforce.
- c. Developing and maintaining an information infrastructure that supports current cybersecurity frameworks, including NIST 800 standards.

29. In addition to the immediate impacts and reliance interests described above, there are longer term impacts that are both cumulative and cascading.

30. As stated above, any disruption to Rochester's research will also have negative effects across Central and Western New York State. Approximately 38,000 New York State residents are employed by the University of Rochester—and it collaborates with state and local partners to help solve regional challenges through joint research and innovation. Rochester's research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social impact. A massive reduction in Rochester's research budget would immediately and seriously jeopardize these contributions spanning from New York State across the nation, and would have a negative multiplier effect on the local and regional economy.

31. Finally, slowdowns or halts in research by Rochester and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance. As stated above, Rochester provides vital training for the next generation of



scientists—many of whom will consider pursuing degrees and careers outside the United States should research funding at Rochester slow down or halt.

32. Nor can Rochester cover the funding gap itself, as the University already invests approximately \$137 million annually to its research mission through the School of Medicine and Dentistry—an amount that is already imperiled due to pressures associated with reimbursement of clinical care, large increases in staffing costs, changes in the clinical workforce, and other market realities. The University’s School of Arts and Sciences and Hajim School of Engineering also contribute at least approximately \$26 million annually to the University’s research activities.

33. While Rochester maintains an endowment, it is neither feasible nor sustainable to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:


- a. A significant portion of Rochester’s endowment is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. Rochester is not legally permitted to use those funds to cover research infrastructure costs.
- b. As a non-profit institution, Rochester reinvests any minimal revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, Rochester does not generate significant surpluses that could be redirected to research without impacting core academic priorities such as educational programs and financial aid support for students.

34. Moreover, absorbing the financial impact of either a lower indirect cost rate or a fully terminated grant, even if it were possible, would create long-term budget pressures on

Rochester—which would in turn force reductions in key investments supporting Rochester’s faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain Rochester’s academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 14, 2025, at Rochester, New York.

  
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Stephen Dewhurst